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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/707,486	11/07/2000	Jack D. Pippin	423901674C2DA	9610
22850	7590	08/25/2006	EXAMINER	
C. IRVIN MCCLELLAND OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			FREJD, RUSSELL WARREN	
			ART UNIT	PAPER NUMBER
			2128	

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/707,486

Applicant(s)

PIPPIN, JACK D.

Examiner

Russell Frejd

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 7, 16, 25 and 35 is/are rejected.
- 7) ☒ Claim(s) 2-6, 8-15, 17-24, 26-34 and 36-40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3.15.06</u> | 6) <input type="checkbox"/> Other: _____  |

In re Application of: Pippin

***Examination of Application #09/707,486***

1. Claims 1-40 of application 09/707,486, filed on 7-November-2000, are presented for examination. This communication is in response to applicant's amendment received on May 1, 2006. The examiner has elected to maintain the rejections noted below, with the following explanations.

***Double Patenting Rejections***

2.1 The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.3218 may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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**2.2** Claims 1, 7, 16, 25 and 35 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 38-42, 46-48, 50, 52 and 53 of U.S. Patent Application No. 08/636,024. This a provisional rejection as the claims of the '024 application have not yet been allowed. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present invention is directed to a temperature-based clock frequency controller, and the application is directed to a programmable thermal sensor for an integrated circuit (Title from each application). Furthermore, the claims noted above of the present invention and the application are each directed to concepts for:

In regard to claims 1 and 16 of the present invention and claim 38 of the '024 application, a register to store a threshold temperature value, a thermal sensor, and clock adjustment logic to decrease (vary in '024) a clock frequency in response to the thermal sensor indicating that the threshold temperature has been exceeded.

In regard to claims 25 and 35 of the present invention and claim 38 of the '024 application, each of the limitations noted above, along with generation of a first interrupt signal, and varying the clock frequency in response to the first interrupt signal.

In regard to claim 7 of the present application and claim 38 of the '024 application, a fail-safe sensor and halt logic to halt operation of the integrated circuit in response to the fail-safe sensor indicating that a fail-safe threshold temperature has been exceeded.

For at least these reasons, one of ordinary skill would have found it obvious that the temperature-based clock frequency controller of the present invention and the programmable thermal sensor of the application are not patentably distinct in so far as the specifications of each application support the identical critical features noted above.

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***Claim Rejections under 35 U.S.C. § 102***

**3.** The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**3.1** Claims 1, 16, 25 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakagawa, Kokai Patent Application HEI 2[1990]-83720, published 23-March-1990.

**3.2** Nakagawa disclosed the invention as claimed, including a method of controlling a temperature of a microprocessor by the following steps:

a) generating a temperature signal within the microprocessor indicative of the temperature of the microprocessor [Temperature monitor **5** sending Temperature data **10** to Decoder **12**, Fig. 1];

b) comparing the temperature signal to a first threshold temperature level within the microprocessor [comparison made by Selector **9**, Fig. 1];

c) generating an interrupt signal if the temperature signal indicates that the first threshold temperature level has been exceeded [Selector signal **13** acts as an interrupt signal to choose the frequency supplied by Frequency divider circuit **8**, Fig. 1]; and

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d) decreasing a microprocessor clock frequency in response to the interrupt signal [decreased frequency selected by Selector 9 is sent to Computer system 1, Fig.1].

**3.3** It is noted by the examiner that Nakagawa does not expressly include a register for use in storing a value corresponding to a threshold temperature. However, the translation of Nakagawa in the final sentence on page 7 states, "Alternatively, instead of using hardware, the temperature data can be observed using a program from the computer system, and the operating frequency controlled by the program." Nakagawa, therefore, teaches the use of computer programs to control frequencies, and the use of registers is inherent in the operation of a computer program.

Applicant, in the present amendment, asserts that Nakagawa does not define an IC or microprocessor including a register for storing threshold temperature values, and that Nakagawa merely teaches using a program from the computer system "to observe" the temperature data. Also, claim 35 was amended to include the limitation of storing threshold temperature values in a register of the microprocessor whose temperature is being controlled.

The Examiner respectfully notes that the method of Nakagawa is disclosed in terms of both hardware and software. In fact, Nakagawa discloses that a voltage output ( $V_s$ ), which is pertinent to the temperature data (10) shown in Figure 2, is outputted to the computer system (1). It is clear that, even though this data is passed to the computer system through the various temperature monitors, converters, and decoders, the voltage value outputted to the computer system is a signal that the computer system stores for use in determining its own temperature-based operational parameters. For at least this reason, the Examiner posits that the use of a

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register to store threshold temperature values, in whatever form, is inherent to the operation of a computer system.

### ***Claim Objections***

4. Claims 2-15, 17-24, 26-34 and 36-40 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response Guidelines***

5. A shortened statutory period for response to this action is set to expire **3 (three) months and 0 (zero) days** from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02, 710.02(b)).

**5.1 Any response to the Examiner in regard to this non-final action should be**

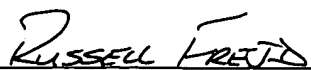
**directed to:** Russell Frejd, telephone number (571) 272-3779, Monday-Friday from 0530 to 1400 ET, **or** the examiner's supervisor, Kamini Shah, telephone number (571) 272-2279. Inquires of a general nature or relating to the status of this application should be directed to the TC2100 Group Receptionist (571) 272-2100.

**mailed to:** Commissioner of Patents and Trademarks  
P.O. Box 1450, Alexandria, VA 22313-1450

**or faxed to:** (571) 273-8300

Hand-delivered responses should be brought to the Customer Service Window, Randolph Building, 401 Dulany Street, Alexandria, VA, 22314.

**Date:** 20-August-2006

  
\_\_\_\_\_  
**RUSSELL FREJD**  
**PRIMARY EXAMINER**